



STL[®]

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ANALYTICAL REPORT

PROJECT NO. 31691

KREJCI DUMP SITE

Lot #: A5J130339

Steve Day

**Conestoga-Rovers & Associates,
651 Colby Drive
Waterloo, Ontario, N2V 1C2**

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick
Project Manager

October 30, 2005

CASE NARRATIVE

A5J130339

The following report contains the analytical results for one solid sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the Krejci Dump Site, project number 31691. The sample was received October 13, 2005, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Steve Day on October 25, 2005. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 30.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9°C.

CASE NARRATIVE (continued)

POLYCHLORINATED BIPHENYLS-8082

The analytical results met the requirements of the laboratory's QA/QC program.

METALS

The matrix spike/matrix spike duplicate(s) for batch(es) 5287020 had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride
Acetone
2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper
Iron
Zinc
Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), North Carolina (#39702), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)



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EXECUTIVE SUMMARY - Detection Highlights

A5J130339

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
RD-3 10/13/05 09:15 001				
Arsenic	5.9	1.2	mg/kg	SW846 6010B
Lead	27.3	0.37	mg/kg	SW846 6010B
Barium	41.3	24.5	mg/kg	SW846 6010B
Chromium	12.4	1.2	mg/kg	SW846 6010B
Percent Solids	81.8	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A5J130339

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
PCBs by SW-846 8082	SW846 8082
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A5J130339

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
HMNNJ	001	RD-3		10/13/05	09:15

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: RD-3

GC Semivolatiles

Lot-Sample #...: A5J130339-001 Work Order #...: HMNNJ1AL Matrix.....: SO
Date Sampled...: 10/13/05 09:15 Date Received..: 10/13/05
Prep Date.....: 10/17/05 Analysis Date..: 10/24/05
Prep Batch #...: 5290022
Dilution Factor: 1
% Moisture.....: 18 Method.....: SW846 8082

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Tetrachloro-m-xylene	99	(10 - 127)
Decachlorobiphenyl	111	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: RD-3

TOTAL Metals

Lot-Sample #...: A5J130339-001

Matrix.....: SO

Date Sampled...: 10/13/05 09:15 **Date Received...:** 10/13/05

% Moisture.....: 18

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 5287020						
Arsenic	5.9	1.2	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AT
		Dilution Factor: 1				
Barium	41.3	24.5	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AN
		Dilution Factor: 1				
Cadmium	ND	0.61	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AP
		Dilution Factor: 1				
Lead	27.3	0.37	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AU
		Dilution Factor: 1				
Chromium	12.4	1.2	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AQ
		Dilution Factor: 1				
Selenium	ND	0.61	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AV
		Dilution Factor: 1				
Silver	ND	1.2	mg/kg	SW846 6010B	10/14-10/18/05	HMNNJ1AR
		Dilution Factor: 1				
Mercury	ND	0.12	mg/kg	SW846 7471A	10/14-10/18/05	HMNNJ1AW
		Dilution Factor: 1				

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: RD-3

TCLP Metals

Lot-Sample #...: A5J130339-001

Matrix.....: SO

Date Sampled...: 10/13/05 09:15 **Date Received...:** 10/13/05

Leach Date.....: 10/17/05 **Leach Batch #...:** P529001

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 5292028						
Arsenic	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AA
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AC
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AD
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AF
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AG
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMNNJ1AH
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	10/19/05	HMNNJ1AJ
		Dilution Factor: 1				

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Conestoga-Rovers & Associates, Inc.

Client Sample ID: RD-3

General Chemistry

Lot-Sample #...: A5J130339-001 Work Order #...: HMNNJ Matrix.....: SO
Date Sampled...: 10/13/05 09:15 Date Received..: 10/13/05
% Moisture.....: 18

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Solids	81.8	10.0	%	MCAWW 160.3 MOD	10/24-10/25/05	5297717

Dilution Factor: 1

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J130339
MB Lot-Sample #: A5J170000-022

Work Order #...: HMVR51AA

Matrix.....: SOLID

Analysis Date...: 10/24/05

Prep Date.....: 10/17/05

Prep Batch #...: 5290022

Dilution Factor: 1

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	71	(10 - 127)
Decachlorobiphenyl	78	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A5J140000-020 Prep Batch #... : 5287020						
Arsenic	ND	1.0	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AA
		Dilution Factor: 1				
Barium	ND	20.0	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AH
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AK
		Dilution Factor: 1				
Lead	ND	0.30	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AC
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AM
		Dilution Factor: 1				
Selenium	ND	0.50	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AD
		Dilution Factor: 1				
Silver	ND	1.0	mg/kg	SW846 6010B	10/14-10/18/05	HMPHF1AW
		Dilution Factor: 1				
Mercury	ND	0.10	mg/kg	SW846 7471A	10/14-10/18/05	HMPHF1A2
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A5J170000-286 Prep Batch #... : 5292028 Leach Date.....: 10/17/05 Leach Batch #... : P529001						
Arsenic	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AA
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AC
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AD
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AF
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AG
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HMWL31AH
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	10/19/05	HMWL31AJ
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A5J190000-028 Prep Batch #... : 5292028						
Arsenic	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AA
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AC
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AD
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AF
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AG
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	10/19-10/20/05	HM2EJ1AH
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	10/19/05	HM2EJ1AJ
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A5J130339

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Percent Solids		Work Order #: HNH3T1AA		MB Lot-Sample #:	A5J240000-717	
	ND	10.0	%	MCAWW 160.3 MOD	10/24-10/25/05	5297717
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J130339 Work Order #...: HMVR51AC Matrix.....: SOLID
 LCS Lot-Sample#: A5J170000-022
 Prep Date.....: 10/17/05 Analysis Date...: 10/24/05
 Prep Batch #...: 5290022
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Aroclor 1016	71	(41 - 130)	SW846 8082
Aroclor 1260	81	(42 - 130)	SW846 8082

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	73	(10 - 127)
Decachlorobiphenyl	88	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: A5J140000-020 Prep Batch #... : 5287020					
Arsenic	90	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1A3
		Dilution Factor: 1			
Barium	100	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1A9
		Dilution Factor: 1			
Lead	92	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1A4
		Dilution Factor: 1			
Cadmium	92	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1CC
		Dilution Factor: 1			
Selenium	93	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1A5
		Dilution Factor: 1			
Chromium	97	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1CE
		Dilution Factor: 1			
Silver	108	(80 - 120)	SW846 6010B	10/14-10/18/05	HMPHF1CN
		Dilution Factor: 1			
Mercury	93	(73 - 123)	SW846 7471A	10/14-10/18/05	HMPHF1CT
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A5J190000-028 Prep Batch #... : 5292028					
Arsenic	102	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AK
		Dilution Factor: 1			
Barium	106	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AL
		Dilution Factor: 1			
Cadmium	108	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AM
		Dilution Factor: 1			
Chromium	110	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AN
		Dilution Factor: 1			
Lead	108	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AP
		Dilution Factor: 1			
Selenium	104	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AQ
		Dilution Factor: 1			
Silver	115	(50 - 150)	SW846 6010B	10/19-10/20/05	HM2EJ1AR
		Dilution Factor: 1			
Mercury	114	(50 - 150)	SW846 7470A	10/19/05	HM2EJ1AT
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J130339 Work Order #...: HMNAM1AF-MS Matrix.....: SOLID
 MS Lot-Sample #: A5J130289-001 HMNAM1AG-MSD
 Date Sampled...: 10/12/05 09:00 Date Received...: 10/13/05
 Prep Date.....: 10/17/05 Analysis Date...: 10/24/05
 Prep Batch #...: 5290022
 Dilution Factor: 1 % Moisture.....: 21

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	191	(10 - 200)			SW846 8082
	196	(10 - 200)	2.9	(0-30)	SW846 8082
Aroclor 1260	170	(10 - 200)			SW846 8082
	194	(10 - 200)	13	(0-30)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	189	(10 - 127)
	234	(10 - 127)
Decachlorobiphenyl	213	(40 - 138)
	241	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

Date Sampled...: 10/11/05 08:15 Date Received...: 10/12/05

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A5J120353-001 Prep Batch #...: 5287020						
					% Moisture.....: 17	
Arsenic	82	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1A8
	83	(75 - 125)	1.1 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1A9
Dilution Factor: 1						
Barium	102	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1CM
	97	(75 - 125)	3.4 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1CN
Dilution Factor: 1						
Cadmium	83	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1CR
	84	(75 - 125)	0.84 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1CT
Dilution Factor: 1						
Lead	41 N	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1CA
	78 *	(75 - 125)	27 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1CC
Dilution Factor: 1						
Chromium	115	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1CW
	110	(75 - 125)	2.9 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1CX
Dilution Factor: 1						
Selenium	84	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1CD
	84	(75 - 125)	0.25 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1CE
Dilution Factor: 1						
Silver	98	(75 - 125)		SW846 6010B	10/14-10/18/05	HMKNE1DF
	98	(75 - 125)	0.77 (0-20)	SW846 6010B	10/14-10/18/05	HMKNE1DG
Dilution Factor: 1						
Mercury	97	(10 - 199)		SW846 7471A	10/14-10/18/05	HMKNE1DP
	89	(10 - 199)	5.5 (0-50)	SW846 7471A	10/14-10/18/05	HMKNE1DQ
Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

* Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A5J130339

Matrix.....: SOLID

Date Sampled...: 10/11/05 15:30 Date Received...: 10/12/05

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A5J130185-001 Prep Batch #... : 5292028						
Leach Date..... : 10/17/05 Leach Batch #... : P529001						
Arsenic	103	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1AL
	101	(50 - 150)	1.8 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1AM
Dilution Factor: 5						
Barium	101	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1AN
	99	(50 - 150)	1.5 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1AP
Dilution Factor: 5						
Cadmium	106	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1AQ
	105	(50 - 150)	1.6 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1AR
Dilution Factor: 5						
Chromium	105	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1AT
	103	(50 - 150)	1.8 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1AU
Dilution Factor: 5						
Lead	106	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1AV
	104	(50 - 150)	1.8 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1AW
Dilution Factor: 5						
Selenium	104	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1AX
	102	(50 - 150)	1.1 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1A0
Dilution Factor: 5						
Silver	103	(50 - 150)		SW846 6010B	10/19-10/20/05	HMMDA1A1
	101	(50 - 150)	2.3 (0-20)	SW846 6010B	10/19-10/20/05	HMMDA1A2
Dilution Factor: 5						
Mercury	115	(50 - 150)		SW846 7470A	10/19/05	HMMDA1A3
	114	(50 - 150)	1.2 (0-20)	SW846 7470A	10/19/05	HMMDA1A4
Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5J130339

Work Order #...: HMNNJ-SMP
HMNNJ-DUP

Matrix.....: SO

Date Sampled...: 10/13/05 09:15 Date Received...: 10/13/05

% Moisture.....: 18

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Solids	81.8	78.4	%	4.3	(0-20)	SD Lot-Sample #: A5J130339-001 MCAWW 160.3 MOD	10/24-10/25/05	5297717

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5J130339

Work Order #...: HNFF8-SMP
HNFF8-DUP

Matrix.....: SOLID

Date Sampled...: 10/20/05

Date Received...: 10/22/05

% Moisture.....: 23

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Percent Solids	77.0	78.1	%	1.4	(0-20)	SD Lot-Sample #: A5J220260-001 MCAWW 160.3 MOD	10/24-10/25/05	5297717

Dilution Factor: 1

SHIPPED TO (Laboratory Name):

576

REFERENCE NUMBER:

31691

PROJECT NAME:

KATJC! DUMP SITE

SAMPLER'S SIGNATURE: Don Newton PRINTED NAME: Dan Newton

PRINTED NAME: Dan Newton

SEQ. No.	DATE	TIME	SAMPLE NO.
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SAMPLE TYPE	No. CONTA
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PARAMETERS
Pc-B
Tot. Metals
Tcup Metals

REMARKS

[illegible]

TOTAL NUMBER OF CONTAINERS

2

RELINQUISHED BY Dr Nanto
1. _____

DATE: 10.13.01
TIME: 1053

RECEIVED BY: 2. _____

DALE:
TIME:

2. _____
RELINQUISHED BY:

DATE: _____
TIME: _____

RECEIVED BY: _____
3. _____

DATE: _____
TIME: _____

3. RELINQUISHED BY:

TIME:

4. _____

TIME:

METHOD OF SHIPMENT:

AIR BILL No.

Write -Fully Executed Copy

Pink

-Shipper Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

Yellow --Receiving Laboratory Copy **Goldendrod** --Sampler Copy

Gold

-Sampler Copy

7 Attention

5. 5.

DATE: 10-13-05 TIME: 15:31

STL Cooler Receipt Form/Narrative

North Canton Facility

Lot Number: ASS130339

Client: CRA
 Cooler Received on: 10/13/05
 Fedx ☐ Client Drop Off ☒ UPS ☐
 Stetson ☐ US Cargo ☐
 STL Cooler No# 171

Project: Kreji Dump Site Quote#: 6471966949
 Opened on: 10/13/05 by Berry (Signature)
 DHL ☐ FAS ☐ STL Courier ☐
 Other: _____

- Foam Box ☐ Client Cooler ☐ Other _____
1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
 If YES, Quantity _____
 Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
 2. Shipper's packing slip attached to this form? Yes ☐ No ☒ NA ☐
 3. Did custody papers accompany the samples? Yes ☒ No ☐
 4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
 5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other: _____
 6. Cooler temperature upon receipt 19 °C (see back of form for multiple coolers/temp)
 METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H₂O Slurry ☐
 COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
 7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
 8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☒ No ☐
 9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☒
 10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
 11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
 12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
 13. Was a Trip Blank present in the cooler? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒
 14. Does the trip blank number match the cooler number in which it was received? Yes ☐ No ☐ NA ☒
 Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
 Concerning: _____

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). Nitric Acid Lot # 091305-HNO₃; Sulfuric Acid Lot # 041305-H₂SO₄; Sodium Hydroxide Lot # -041305 -NaOH; Hydrochloric Acid Lot # 100504 HCl; Sodium Hydroxide and Zinc Acetate Lot # 071604 CH₃COO₂Zn/NaOH
 Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

<u>Discrepancies Cont.</u>	

END OF REPORT